AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

Claim 1. (Currently amended) A method comprising:

detecting fading characteristics of a dynamically fading channel from a received signal; and

determining a set of correction parameters of a quantization correction command based on the fading characteristics for a segment of said received signal to be used to produce a quantized signal.

Claim 2. (Currently amended) The method according to claim 1, further comprising quantizing the at least a segment of the signal according to said quantization correction command, to produce a the quantized signal.

Claim 3. (Previously presented) The method according to claim 2, further comprising decoding said quantized signal.

Claim 4. (Cancelled)

Claim 5. (Previously presented) The method according to claim 1, further comprising demodulating said received signal.

Claim 6. (Currently amended) A method comprising:

detecting fading characteristics of a signal received over a dynamically fading channel by estimating a root-mean-square (RMS) of said received signal and computing the minimum and maximum quantities of samples of said received signal;

determining a set of correction parameters of a correction command

according to the detected fading characteristic; and

quantizing at least one segment of said received signal according to a said

quantization correction command to produce a quantized signal.

Claim 7. (Currently amended) The method according to claim 6, comprising:

estimating a desired root-mean-square RMS value to determine the quantization
correction command.

Claim 8. (Currently amended) The method according to claim 7, further comprising
normalizing said received signal according to said desired root-mean-square RMS value.

Claim 9. (Previously presented) The method according to claim 6, wherein detecting the
fading characteristics comprises:

estimating a root-mean-square (RMS) of said received signal, to produce

an Estimated_RMS value; and

estimating channel tap values $\hat{h}[n]$ from said received signal.

Claim 10. (Previously presented) The method according to claim 9, wherein determining
the quantization correction command comprises:

calculating Θ_{MIN} and Θ_{MAX} values, wherein

$$\Theta[n] = \left|\mathrm{Real}\{\hat{h}[n]\}\right| + \left|\mathrm{Imag}\{\hat{h}[n]\}\right|, \quad \Theta_{MAX} \equiv Max_n\{\Theta[n]\}, \quad \text{and} \quad \Theta_{MIN} \equiv Min_n\{\Theta[n]\};$$

and

determining a desired_RMS_fade value from said Θ_{MIN}, Θ_{MAX}, and $\Theta[n]$.

Claim 11. (Previously presented) The method according to claim 9, further comprising normalizing said received signal.

Claim 12. (Previously presented) The method according to claim 11, wherein determining the quantization correction command comprises:

calculating Θ_{MIN} and Θ_{MAX} values, wherein

$$\Theta[n] \equiv \left| Real\{\hat{h}[n]\} \right| + \left| Imag\{\hat{h}[n]\} \right|, \quad \Theta_{MAX} \equiv Max_n\{\Theta[n]\}, \quad \text{and} \quad \Theta_{MIN} \equiv Min_n\{\Theta[n]\};$$

and

determining a desired_RMS_fade value from said Θ_{MIN}, Θ_{MAX}, and $\Theta[n]$;

and

wherein normalizing said samples is performed according to the following expression:

$$\tilde{Y}[n] = \frac{Desired\_RMS\_Fade}{Estimated\_RMS} \cdot Y[n]$$

wherein $Y[n]$ denotes a pre-quantized value of a selected sample and $\tilde{Y}[n]$ denotes a normalized pre-quantized value of said selected sample.

Claim 13. (Currently Amended) The method according to ~~either of~~ claims ~~10 and~~ 12, wherein said desired_RMS_fade value is determined from said Θ_{MIN}, Θ_{MAX}, and $\Theta[n]$ according to a look-up table having $\Theta_{MAX} - \Theta_{MIN}$ at its input and Desired_RMS_Fade at its output.

Claim 14. (Currently amended) In a receiver which includes a signal reception unit, a demodulator and a decoder, the receiver receiving a signal from a dynamically fading channel, the demodulator demodulating said received signal ~~thereby~~ to produc~~ing~~e a demodulated signal, a quantizing device comprising:

· a channel fading detection unit, coupled to said signal reception unit, to detect fading characteristics of said dynamically fading channel;

a processor, coupled to said channel fading detection unit, to process said fading characteristics so as to produce a <u>quantization</u> correction command <u>that includes a set of correction parameters</u> for at least one segment of said received signal; and

a quantizing unit, coupled to said processor, to said demodulator and to said decoder, to quantize said demodulated signal so as to produce a quantized signal and to correct said at least one segment according to said correction command, wherein said decoder is to decode said quantized signal.

Claims 15 – 17. (Cancelled)

Claim 18. (Currently amended) In a receiver which includes a signal reception unit, a demodulator, a quantizing unit and a decoder, the receiver receiving a signal from a dynamically fading channel, the demodulator demodulating said received signal to produce demodulated signal, a fading compensation device comprising:

a channel fading detection unit, coupled to said signal reception unit, to detect fading characteristics of said dynamically fading channel;

a processor, coupled to said channel fading detection unit, to process said fading characteristics, so as to produce a correction command <u>that includes a set of correction parameters to quantize</u> ~~for~~ at least one segment of said received signal; and

a correction unit, coupled to said processor, to said demodulator and to said quantizing unit, to correct a demodulated segment corresponding to said at least one segment according to said correction command so as to produce a corrected segment,

wherein said correction unit is to replace said demodulated segment with said corrected segment at the input of said quantizing unit.

Claims 19-20. (cancelled)

Claim 21. (Previously presented) The fading compensation device, according to claim 18, wherein said processor is further coupled to said decoder so as to provide said correction command to said decoder to enable decoding the quantized representation of said corrected segment, with respect to said correction command.

Claim 22. (Previously presented) A receiver comprising:

a signal reception unit to receive a signal from a dynamically fading channel;

a demodulator, coupled to said signal reception unit, to demodulate said received signal to produce a demodulated signal therefrom;

a quantizing processor, coupled to said demodulator and to said signal reception unit, to analyze said received signal and to quantize said demodulated signal to produce a quantized signal; and

a decoder, coupled to said quantizing processor, to decode said quantized signal, wherein said quantizing processor is to normalize said demodulated signal according to the estimated fading of said received signal.

Claim 23. (Previously presented) The receiver according to claim 22, wherein said received signal is a direct sequence – code division multiple access (DS-CDMA) signal and wherein said demodulator is a rake receiver.

Claim 24. (Previously presented) The receiver according to claim 23, wherein said quantizing processor is to analyze said received signal by summing channel taps of selected fingers.

Claim 25. (Original) The receiver according to claim 22, wherein said decoder is a Viterbi decoder.

Claims 26 – 27. (Cancelled)

Claim 28. (Currently Amended) A method of producing a quantized signal comprising:

quantizing at least one segment of a signal received over a dynamically fading channel ~~according~~ by using a set of correction parameters ~~to~~ of a quantization correction command that is determined, at least in part, from fading characteristics of said channel.

Claim 29. (Currently Amended) A receiver comprising:

a channel estimator to detect fading characteristics of a dynamically fading channel; and

a quantizer to quantize at least one segment of a signal received over said dynamically fading channel ~~according to~~ by using a set of correction parameters of a quantization correction command that is determined at least in part from said fading characteristics.

Claim 30. (Previously presented) The receiver of claim 29 further comprising:

a processor coupled to said channel estimator and to said quantizer, said processor to produce said quantization correction command.

Claim 31. (Currently amended) A receiver comprising:

a quantizer to quantize at least one segment of a received signal ~~according to~~ by using a set of correction parameters of a quantization correction command; and

a processor to determine said quantization correction command from code properties of a frame of said received signal containing said at least one segment,

wherein at least one frame of said received signal has different code properties than another frame of said received signal.

Claim 32. (Original) The receiver of claim 31, wherein said received signal received over a dynamically fading channel and said processor is further adapted to determined said quantization correction command from fading characteristics of said channel.